BULLETIN OF
THE NEW YORK ACADEMY
OF MEDICINE

VOL. 53, NO. 6 JULY-AUGUST 1977

TUBERCULOSIS IN A GENERAL HOSPITAL*

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THE declining incidence of tuberculosis coupled with increasingly effective treatment has changed it from a disease of high mortality and prolonged morbidity to a disease of low mortality and a morbidity as short as that of any other infection of the lung. As a result, tuberculosis is now a gratifying disease to treat in that we can expect almost certain cure. The patient can expect a rapid return of well being and an early return to normal life. It is, then, a disease which we need no longer fear.

These changes have made special hospitals and sanatoria unnecessary and there now are no such hospitals remaining in New York State. Tuberculosis now is treated in the general hospital in inpatient and outpatient services.

I shall discuss the duties which the general hospital assumes when treating tuberculosis, where problems are likely to develop, and where help

*Presented as part of a *Symposium on Selected Aspects of Pulmonary Disease* held by the Section on Medicine of the New York Academy of Medicine March 3, 1976.

may be needed from the health department. In 1968 the National Tuberculosis Association, now the National Lung Association, published guidelines for the general hospital in the admission and care of tuberculous patients. This states that before a general hospital assumes such responsibility it must make sure that the following are provided:

1) Adequate consultation services

2) Beds to which the tuberculous patient will be admitted

3) Laboratory services competent in the biochemical and bacteriological techniques needed to diagnose and evaluate tuberculosis

4) Necessary radiological services

5) An interested and understanding nursing and paraprofessional staff

6) An educational program to provide training and experience for all personnel, both professional and paraprofessional

7) Necessary outpatient services and follow-up

I believe these requirements are as important today as when written, although perhaps the last has become most important. I would like to add an eighth factor: personnel health.

I shall now review these in order, and relate them to services we have provided at the Roosevelt Hospital.

1) Adequate consultation services. This consists of two parts:

   a) Ready pulmonary medical consultation for any patient suspected of having this disease by physicians experienced in the diagnosis and management of tuberculosis.

   b) Since so many patients with tuberculosis are in older age groups and have concomitant disease, all kinds of surgical and medical consultation must be available for them.

2) Beds for care of tuberculous patients. Since pulmonary tuberculosis is an infectious disease spread by droplets, rooms adequate for respiratory isolation must be available. These rooms should be properly ventilated, preferably by exhaust ventilation. Where possible, ultraviolet light should be used to irradiate the upper air of the room as a further aid in reducing the infectiousness of the air. Gowns and gloves are not necessary, since tuberculosis is not spread by contact. Masks are useless since the droplet nucleus, only 5μ in size, can pass through the pores of most masks. Also, coughing into a mask may be an aid to the formation of droplets. The duration of isolation should be two to three weeks.

3) Laboratory facilities

   a) Bacteriological facilities are necessary for identification and proper

speciation of acid-fast bacteria on smear, in tissue sections, on culture, and for sensistivity studies.

b) Routine hematological and biochemical studies should be performed, particularly for the determination of liver function.

c) Histological facilities are necessary for the study of biopsy specimens, both of suspect tuberculous disease and in differential diagnosis of liver toxicity.

4) Radiological studies should include both routine examination of the chest and tomography, along with interpretation.

5) An interested and understanding nursing and paraprofessional staff. A nursing and paraprofessional staff in the ward and clinic who understand tuberculosis and who do not fear it is essential to the proper care of patients. The development of such a staff is dependent on factor No. 6.

6) An educational program. This should include education for medical house staff, nursing, and paraprofessional persons who will come in contact with the patients. The program should be ongoing, so that changes in treatment can be applied and quickly understood as they are developed. This, to a large extent, has been carried out at the Roosevelt Hospital by a nurse-epidemiologist assisted by the Committee on Infections.

7) Outpatient follow-up. A clinic which provides continued supervision of these patients by a trained staff is essential. This clinic also should be able to screen contacts and have a system of rapid recall for patients who miss visits. It is in this area that help is needed, since too often the general hospital does not have a mechanism for the recall of patients or contacts if they do not respond to written appointments.

8) Personnel health. Ideally, all employees should be screened with purified protein derivative (PPD) tuberculin; and where this test is positive, chest x rays should be made. Follow-up should be provided for persons in sensitive areas.